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1. Device for carrying out chemical reactions and processes in high-frequency fields, comprising a high-frequency chamber which can be irradiated with at least one radiation source, in which a reactor can be exposed to the action of the high-frequency field, the reactor being able to be closed by a cover, the reactor being fixed on or in the upper wall of the high-frequency chamber through a separable positive and nonpositive engagement connection and contains the solid, liquid and/or gaseous substance or substance mixtures to be investigated or to be treated, in a pressure-resistant surroundings, wherein rod-like elements are provided around the reactor, and form a pressure-resistant cage, which can be connected to the wall of the high-frequency chamber in a positive and nonpositive manner of engagement to secure them either individually through fixing elements and each of which has a guide for holding a crown-shaped holder for the reactor or a reactor closure where the holder is fixed in its position in the manufacture of the positive and nonpositive engagement fixing of the rod-like elements.

2. Device according to Claim 1, wherein the rod-like elements are cylindrical and have as a guide a narrowing of the diameter which does not reach to the end of the rod-like element and that the holder preferably has u-shaped grooves which correspond in their position with the guides of the rod-like elements.

3. Device according to Claim 1, wherein the fixing elements each consist of a fixing adapter with a threaded bore on the face, with which the rod-like elements can be secured as well as separated with the aid of screw connections on bores in the upper wall and on the cover of the high-frequency chamber.

4. Device according to Claim 1, wherein the fixing elements consist of a threaded bore on the face, provided directly in the rod-like elements, through which the rod-like elements can be secured on or separated from bores with the aid of screw connections in the upper wall and in the cover of the high-frequency chamber.

5. Device according to Claim 3, wherein the cover of the reactor has screw connections corresponding with the position of the bores of the upper wall of the high-frequency chamber as well as with the threaded bores of the rod-like elements or their fixing adapter, whereby, with the securing of the cover on the upper wall of the high-frequency chamber at the same time the rod-like elements are secured and fixed in their position to clamp the crown-shaped holder, and the high-frequency chamber is closed so that it is tight to microwaves.

6. Device according to Claim 1, wherein the reactor has an upper reactor closure which is connected to the cover and, together with this, can be separated from reactor.

7. Device according to Claim 1, wherein the reactor has a lower reactor closure which can be separated from the reactor and is provided for holding the crown-shaped holder.

8. Device according to Claim 7, wherein the crown-shaped holder and/or the lower reactor closure have guide elements for the purpose of fixing the position of the reactor.

9. Device according to Claim 1, wherein stop elements are provided which facilitate the positive and nonpositive engagement of the rod-like elements on the upper wall of the high-frequency chamber, especially for the purpose of rapid and low-cost mounting or changing of the configuration of the device.

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10. Device according to Claim 19, wherein the annular flange is designed at the same time as a guide element for the cover and the upper reactor closure.

11. Device according to Claim 1, wherein it is built as a single reactor system.

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12. Device according to Claim 1, wherein, as a multiple reactor system, it is provided with multiple reaction chambers for holding inserts.

13. Device according to Claim 1, wherein the reactor or the multiple reaction chambers are designed as a batch reactor system.

14. Device according to Claim 1, wherein the reactor or the multiple reaction chambers are designed as a flow-through reactor system.

Please add new claims 15-19, as follows:

15. Device according to Claim 3, wherein the fixing elements further comprise an annular flange through which the rod-like elements are secured.

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16. Device according to Claim 4, wherein the fixing elements further comprise an annular flange through which the rod-like elements are secured.

17. Device according to Claim 4, wherein the fixing elements further comprise an annular flange through which the rod-like elements are secured.

18. Device according to Claim 8, wherein the guide elements comprise a cylinder groove and a cylinder flange engaging the cylinder groove.

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19. Device according to Claim 9, wherein the stop elements comprise an annular flange.

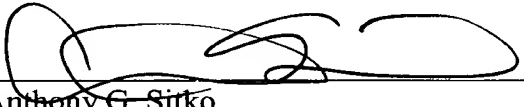
The foregoing amendments are made to place the claims in better form in accordance with US practice. Favorable consideration and allowance is respectfully solicited.

The Commissioner is authorized to charge any deficiency in such payment or any payment required in connection with the filing of this response or to credit any overpayment to Deposit Account 13-2855. A duplicate copy of this paper is enclosed.

Respectfully submitted,

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